

3.0 Solutions Matrix and Site Analysis

3.1 Potential Solutions

The major problems associated with tour bus operations in Washington, DC consist of a shortage of parking and loading/unloading space, associated traffic and safety problems and adverse environmental impacts, including obstruction of view corridors, and intrusion into local neighborhoods, often as a result of parking and traffic problems near tour bus destinations. Strategies for addressing these problems may incorporate the following categories of component actions or measures:

- Increased parking supply consisting of *Peripheral Parking* outside the Monumental Core and downtown;
- *Centrally-located Parking* Facilities
- Downtown Circulator
- Walking Circulation among clustered destinations
- Expansion of Curbside Loading/Unloading space
- Parking Facility Pricing Strategies
- Security Measures
- Advanced Scheduling
- Information Systems
- Routing
- Permitting/Licensing and Enforcement
- Driver Facilities/Shuttle between parking lots and hotels

These actions are evaluated in Table 3-1 in terms of criteria that reflect their feasibility, benefits and costs:

- Logistical feasibility—whether the solution is a practical solution to the problem in terms of meeting tour bus operating requirements;
- Impacts on tour bus operators, visitors, the public parking supply, the environment, and costs to the public.

Impacts to *neighborhoods* are addressed subsequently in this memorandum in terms of specific proposed parking sites. The actions evaluated in Table 3-1 are described below. The locations of existing tour bus parking spaces are shown in Figure 3-1.

3.1.1 Major Actions

Measures in this category could produce the most direct results in terms of solving tour bus problems.

Peripheral Parking: Due to the high density of downtown Washington and high downtown land values, the availability of parcels that can be used for parking tour buses is limited. Thus, a logical solution is to identify sites at the periphery of the District that could serve as tour bus parking areas, at least for relatively long-term parking needs of

Table 3-1
Evaluation of Potential Tour Bus Management Measures

Actions	Logistical Feasibility	Impacts On:				
		Tour Bus Operators	Visitors	Environment	Public Parking Supply	Cost to Public
1. Peripheral Parking	<i>Good</i> for long-term (1 hour or more) parking; not applicable for short-term needs	<i>Positive</i> for long-term (1 hour or more) parking	<i>Neutral; Positive</i> if service reliability is improved	<i>Positive</i> for downtown area, including Monumental Core; net positive, despite increase in emissions at and along routes to peripheral parking sites; similar diluting and shifting of noise impacts away from downtown; potential for neighborhood and other categories of environmental impacts (e.g. groundwater)	<i>Positive</i> because more spaces will become available downtown	<i>Low</i> cost for surface lot development, user fees can cover large share of total cost
2. Centrally-Located Structured Parking Facility	<i>Good</i> for long-term (1 hour or more) parking; <i>questionable</i> for short-term parking	<i>Positive</i> for long-term (1 hour or more) parking; use for short-term parking questionable	<i>Neutral; Positive</i> if service reliability is improved	Reduced VMT-related emissions but concentration of emissions near site and along bus travel routes in downtown area, as above, some spatial shifting of impacts	Depends on whether overall downtown parking supply expands	<i>Expensive</i> -user fees unlikely to meet large share of total cost

Table 3-1 (continued)
Evaluation of Potential Tour Bus Management Measures

Actions	Logistical Feasibility	Impacts On:				
		Tour Bus Operators	Visitors	Environment	Public Parking Supply	Cost to Public
3. Downtown Circulator	Possible but requires significant change in current practice; will not alleviate critical need for loading/unloading space; difficult to accommodate large groups; need adequate space for group waiting areas; can be implemented for specific areas--may be most practical solution for Georgetown	Operators will not have desired control over tour bus groups; increased coordination and new procedures would be needed; possible loss of revenue	Convenience of door to door service would be curtailed	Likely reduction in VMT-related emissions due to elimination of cruising and searching for tour bus parking spaces; will not shift and concentrate adverse impacts, as above	Tour buses would occupy substantially fewer downtown parking spaces, thus increasing availability	Cost covered by other sources
4. Walking Circulation Among Clustered Destinations	Possible but requires significant change in current practice; <i>would</i> alleviate critical need for loading/unloading space; can be combined with Downtown Circulator or implemented only in selected areas.	More difficult to control tour group; less service may reduce groups' willingness to pay for tour bus	Likely to be perceived as significantly less convenient; problematic for senior citizens, people with disabilities	Strongly positive --would reduce VMT, emissions, noise and other adverse impacts relative to existing conditions and above options	Tour buses would occupy substantially fewer downtown area parking spaces, thus increasing availability	Inexpensive --peripheral long-term tour bus parking required
5. Expanding Curbside Loading/Unloading Space	Necessary to address most critical site-specific traffic congestion, except where <i>walk</i> access is increased	Strongly Positive --will reduce queue time and need to circle the block around busy attractions	Strongly Positive --faster, improved service will reduce time in bus	Positive --reduce emissions from queuing, frequent vehicle starts and stops	Could displace curbside parking at points of interest currently available for private vehicles	Low cost unless displaced on-street parking is replaced in expanded public parking garages

Table 3-1 (Cont'd)
Evaluation of Potential Tour Bus Management Measures

Actions	Logistical Feasibility	Impacts On:				
		Tour Bus Operators	Visitors	Environment	Public Parking Supply	Cost to Public
6. Parking Facility Pricing Strategies	Can be implemented readily at publicly owned parking facilities and at selected private facilities through agreement	Positive if parking supply and options are increased	Positive to the extent that pricing supports improved service and cost-effective allocation of parking spaces	Positive-- to the degree that it supports efficient allocation of parking spaces	Positive to the extent that pricing supports efficient allocation of available parking spaces	Positive in that efficiency and cost-effectiveness of parking supply development is increased
7. Advanced Scheduling	Feasibility low for coordinating advanced scheduling of all major attractions; increasing the number of attractions with advanced scheduling through coordinated system is feasible	Positive-- improve scheduling and reliability of service, adherence to itinerary	Strong Positive-- guarantee admission to scheduled attractions; reduce wait/queuing times in buses and on-site	Positive-- would reduce superfluous travel and queuing at points of interest	No significant impact	Development and continuing operating costs; funding source required
8. Information Systems	Simple information systems (e.g. wayfinding signage, website, telephone helpline) highly feasible, but present some technical challenges and entail significant expense; could be combined with security systems	Positive --but more sophisticated systems require expenditures on special equipment	Positive to the extent that service improves	Positive-- would reduce superfluous travel and queuing at points of interest, promote efficient use of parking space	Positive to the degree that tour bus drivers are deterred from parking in public spaces	Varies depending on system

Table 3-1 (Cont'd)
Evaluation of Potential Tour Bus Management Measures

Actions	Logistical Feasibility	Impacts On:				
		Tour Bus Operators	Visitors	Environment	Public Parking Supply	Cost to Public
9. Routing	Highly feasible--DDOT already posts route network on website	Depends on the degree to which movement restricted	May be minor negative impact if travel times increase due to routing restrictions	Positive --reduce VMT and associated adverse environmental impacts in neighborhoods and other sensitive areas	Neutral	Primary expense would be for enforcement
10. Permitting and Enforcement	Feasible--current legal challenges to permitting fees must be resolved; increased enforcement is expensive	Additional cost for tour bus operators may be offset by improved operations	Positive if service is improved	Strongly Positive --essential to achieve environmental objectives	Strongly Positive --Essential to ensure more efficient utilization of parking supply	Positive --additional costs for enforcement; permitting can provide funding source
11. Driver Facilities/ Shuttle for Drivers between parking lots and hotels	Feasible--Metro access may also be viable at some parking facility locations	Strongly positive	No direct impact	Supports use of peripheral parking facilities	Positive to the extent that peripheral tour bus parking becomes viable	Relatively low cost operated on limited schedule

**Figure 3-1. Existing Tour Bus Parking Locations
Downtown and Area South, East and West**

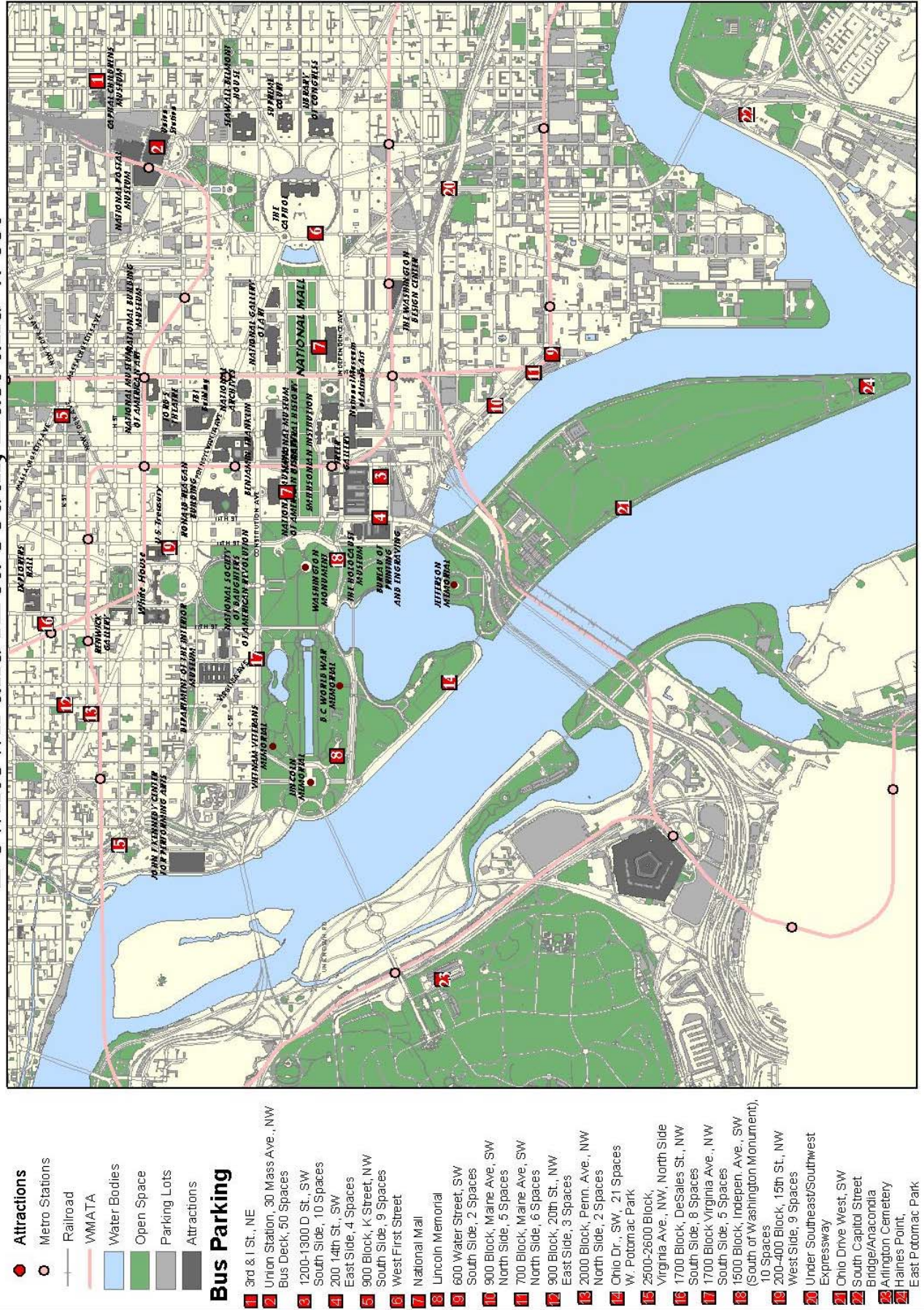


Figure 3-1. Existing Tour Bus Parking Locations - North of Downtown



- Attractions
- Metro Stations
- Railroad
- WMATA
- Water Bodies
- Open Space
- Parking Lots
- Attractions

Bus Parking

- 25 Service Lane off Wisconsin Ave., NW
- 26 3000 Block of Conn. Ave. NW
National Zoological Park,
Parking Lot E, 50 Spaces



one hour or more. This has been the approach followed in most cities that have developed effective approaches to tour bus management.

Access times between parking sites and visitor points of interest should not be excessive. Tour bus operators interviewed for the study suggested that maximum travel times of 10-15 minutes (per direction) would be acceptable for access to this type of longer-term tour bus parking. This criterion has been used in this evaluation of alternate parking sites later in this chapter. Access times of less than 10 minutes have been considered desirable and the shortest possible access time generally is preferred.

Centrally-Located Parking: Despite the high cost of providing parking within the central portion of the District, which includes most points of interest visited by tourists, a number of locations also have been identified within the downtown area that could serve as potential sites for tour bus parking. Generally tour bus parking would be created through the construction of structured parking facilities at these sites, to provide for relatively intensive and high-value use of scarce and expensive real estate.

Another type of centrally located parking would be on-street or curbside spaces. These spaces would serve the valuable function of providing for *short-term* parking needs, which range from periods of less than ½-hour for “photo stops” to up to 1 hour for fast food lunch breaks and quick visits to outdoor monuments.

Downtown Circulator: A *Downtown Circulator* consisting of several possible routes has been proposed to complement existing transit services in the Monumental Core. The *Circulator* could be used to distribute visitors to/from points of interest within its service area, with a “hop-on, hop-off” mode of operation. The service could be designed to complement tour bus operations, addressing the need for distribution among relatively short-term tour group stops, curtailing the hard-to-address need for short-term parking.

As noted in Table 3-1, the *Downtown Circulator* option would require a significant change in current tour bus operations and presents a number of serious logistical challenges. Keeping a typical size tour bus group together on a *Circulator* would be difficult. Individual tour groups would frequently need an entire vehicle to remain intact or would exceed the capacity of a single vehicle.

Perhaps a more serious concern is that a *Circulator* system would not obviate the need for expanded *curbside space* at major points of interest (discussed below). The timing of *Circulator* departures could be scheduled to manage the arrivals of visitors more evenly at individual attractions, consistent with facility loading/unloading capacity, but serving high volumes of peak season tourists will inevitably require the provision of substantial loading/unloading space at popular sites. Moreover, substantial *curbside and pedestrian space* would have to be allocated for the transfer of tour bus passengers between tour buses and the *Downtown Circulator*, unless tour bus operations are radically changed, such that tour bus operations are limited to the intercity or “line-haul” travel segments of the group tour. Potentially, the tour bus/*Circulator* transfer

could take place at one or more tour bus parking facilities, such as Union Station, a centrally-located “intermodal transportation center” or even a peripheral parking site, at a location with sufficient space, such as East Potomac Park.

Walking Circulation: Following a model in effect in many European cities and several smaller U.S. cities, walking could serve more frequently as the distribution mode among points of interest located close to one another. This option, which would be implemented by increased restriction of tour bus activity on roadways in and around the National Mall and perhaps on 10th Street at Ford’s Theatre and in Georgetown, could act either as a complement or alternative to the *Downtown Circulator* option. A major advantage would be reduction in the need for loading/unloading space at a number of locations. Accessibility for people with disabilities would need to be addressed.

Expansion of Loading/Unloading Space: The need for additional loading/unloading space at individual points of interest is the primary factor contributing to traffic congestion during peak tour bus operations. While the shortage of parking leads to the “cruising” of tour buses on the District’s roadways, increased vehicle-miles-traveled (VMT) and associated emission of diesel fumes, and intrusion into neighborhoods, these impacts tend to be diffuse and increases in traffic volumes at *specific locations* generally are relatively small. In contrast, the lack of drop-off/pick-up spaces at or close to visitor attractions results in queuing and concentrated traffic congestion, with spillover traffic to upstream intersections. While traffic police have well-practiced procedures for mitigating impacts on traffic flow, the shortage of loading/unloading space is probably the most noticeable and serious cause of congestion related to tour bus operations. During the peak season, if there are 1,000 tour buses in the District daily, major attractions such as the Capitol, White House, and Air and Space Museum would require about 10 bus berths to accommodate loading/unloading without causing localized traffic back-ups.¹⁹

This report includes a concept that would allocate over 25 loading/unloading spaces on the National Mall (Exhibit 1 and Figure 3-2). This option would make a substantial impact on the need for bus loading/unloading space in the central area, from which tour groups could walk to multiple attractions.

¹⁹ Estimate based on distribution of tour groups among 1-day, 2-3 day, 4-5 day, and 5+day tours, frequency of visiting individual sites, 25% peak hour factor, and 5-minute loading, 10-minute unloading times. Estimates of duration of tours and frequency of visiting sites based on survey data from *Summary Results of Bus Driver Survey*, Barton Aschmann Associates, Inc.